

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested. Claims 2, 7, 11, 13, 18, 21, 23 and 26 have been amended to further recite the claimed invention and to correct typographical errors, all without the intention of narrowing the scope of any of the claims. Claims 1-26 are pending.

Applicant has amended paragraph 41 of page 10 as suggested by Examiner and so kindly requests the withdrawal of the objection to the specification. Further, Applicant has made some corrections of typographical errors in paragraph 56 on page 16 and paragraph 59 on page 18.

Claims 1-20 and 24-26 stand rejected under 35 U.S.C. §103(a) as being obvious in view U.S. patent application publication no. 2002/0155727 to Narita et al. ("Narita et al.") further in view of U.S. patent no. 5,668,733 to Morimoto et al. ("Morimoto et al."). Applicant respectfully traverses the rejection, without prejudice.

Applicant respectfully submits that the Examiner has not presented a *prima facie* case of obviousness. Applicant submits that the cited portions of Narita et al. and/or Morimoto et al. fail to disclose, teach or suggest a computer program product for processing of substrates in at least a part of a substrate processing system, comprising software code configured to obtain at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be introduced into a part of the substrate processing system, and software code configured to determine an order of introduction of the plurality of substrate lots into the part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of substrate lots as recited in claim 1. Further, Applicant submits that the cited portions of Narita et al. and/or Morimoto et al. fail to disclose, teach or suggest a method for processing of substrates in at least a part of a substrate processing system, comprising obtaining, using a processing unit, at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be introduced into a part of the substrate processing system, and determining, using the processing unit, an order of introduction of the plurality of substrate lots into the part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of substrate lots as recited in claim 12. Also, Applicant submits that the cited portions of Narita et al. and/or Morimoto et al. fail to disclose, teach or suggest a track comprising, *inter alia*, a processing unit configured to obtain at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be

introduced into a part of a substrate processing system and to determine an order of introduction of the plurality of substrate lots into the part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of substrate lots as recited in claim 24.

While Narita et al. discloses changing the order of processing of a plurality of substrate lots to decrease the number of cleaning treatments and Morimoto et al. discloses a cycle time for processing of a substrate in a particular lot, Applicant submits that the Examiner has failed to show a suggestion or motivation in the references to modify or combine the references to yield the claimed invention. Indeed, neither Narita et al. nor Morimoto et al. provide any suggestion or motivation to yield the invention as claimed from their combined teaching.

Narita et al. merely addresses changing the order of processing of one or more lots subsequent to a current lot based on whether or not the same cleaning treatment will be applied to the subsequent or next subsequent lot as is being applied to the current lot. If a different cleaning treatment is being applied to the current and subsequent lots and the next subsequent lot has the same cleaning treatment as the current lot, the subsequent lot is shuffled with the next subsequent lot so that a lot with the same cleaning treatment as the current lot will be processed after the current lot. However, Narita et al. does not disclose, teach or suggest that this changing of the order of lots would be effective to at least one of increase the rate of processing and decrease the time of processing of lots as claimed by Applicant. For example, the change in order of lots in Narita et al. may require more changes in other substrate processing setup which could more than offset any time gain achieved by reducing the number of cleaning treatments. Indeed, as identified by the Examiner, Narita et al. fails to obtain at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be introduced into a part of the substrate processing system. Thus, Narita et al. fails to identify or address the larger issues of lot re-ordering.

Further, Applicant submits that Morimoto et al. do not overcome the shortcomings of Narita et al. Morimoto et al. merely disclose a substrate processing apparatus that concurrently processes substrates of a precedent and a subsequent lot when an instruction to perform processing on the subsequent lot B is received during processing on the precedent lot A which has a different flow from that of the subsequent lot B. Thus, like Narita et al., Morimoto et al. clearly do not disclose, teach or suggest determining an order of introduction of the plurality of substrate lots into a part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of

substrate lots. Morimoto et al. does not change the order of lots, rather merely seeks to address concurrent processing of substrates of different lots, lots that are introduced in a specified order, in a substrate processing system.

Applicant also submits that the disclosure of a cycle time for processing of a substrate in a particular lot in Morita et al. in the context of concurrent processing of substrates from different lots, does not provide the motivation or suggestion to determine an order of lots to at least one of increase the rate of processing and decrease the time of processing of the lots. Rather, Applicant submits the teaching of Morimoto et al. would lead a person skilled in the art to improve on the teachings of Narita et al. by, in addition to re-ordering lots to reduce cleaning treatments, better handling concurrent processing of the re-ordered lots. Applicant respectfully submits it does not follow from Narita et al. or Morimoto et al. to modify the teachings of Narita et al. to re-order lots to at least one of increase the rate of processing and decrease the time of processing of the lots.

Respectfully, Applicant submits that the broad overarching principle of “improving efficiency of processing and improving throughput” is not sufficient specific motivation or suggestion to make the invention as claimed. That principle merely articulates a goal and does not identify the required specific motivation or suggestion to combine the teachings to yield the claimed invention, particularly where the asserted combination of teachings from the references could lead to a result opposite to the teachings of a reference.

Specifically, the goal in Narita et al. is to re-order lots to reduce the number of cleaning treatments. However, determining an order of lots to at least one of increase the rate of processing and decrease the time of processing of the lots may instead increase the number of cleaning treatments. For example, the increase in number of cleaning treatments due to a certain order of lots may be offset by other processing rate or time gains from that certain order, even though resulting in a greater number of cleaning treatments. Thus, modification of Narita et al. as proposed may lead to a result opposite to and unexpected from the teachings of Narita et al. Thus, the Examiner has not shown a reasonable expectation of success. Similarly, there is no such expectation of success in relation to Morimoto et al. since the teachings in Morimoto et al. are merely directed to concurrent processing of substrate lots in a fixed order. Re-ordering of lots is simply inapplicable to Morimoto et al.

Claims 2-11 depend from independent claim 1, claims 13-20 depend from independent claim 12, and claims 25-26 depend from independent claim 24 and are, therefore, patentable for at least the same reasons provided above related to respectively claims 1, 12 and 24, and for the additional features recited therein.

Because the cited portions of Narita et al. and Morimoto et al. taken singly or in any proper combination, fail to disclose, teach or suggest the claimed subject matter of claims 1-20 and 24-26, Applicant respectfully requests that the rejection under 35 U.S.C. §103(a) of claims 1-20 and 24-26 based on Narita et al. in view of Morimoto et al. be withdrawn and the claims allowed.

Claims 21-23 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Narita et al. and Morimoto et al. and further in view of U.S. patent no. 6,268,900 to Iwatsu ("Iwatsu"). Applicant respectfully traverses the rejection, without prejudice.

Applicant respectfully submits that the comments above regarding Narita et al. and Morimoto et al. with respect to independent claim 1 apply analogously to independent claim 21. In particular, the cited portions of Narita et al. and Morimoto et al. fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, a processing unit configured to obtain at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be introduced into a part of a substrate processing system and to determine an order of introduction of the plurality of substrate lots into the part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of substrate lots as recited in claim 21.

Furthermore, the cited portions of Iwatsu fail to overcome any of the deficiencies of Narita et al. and Morimoto et al. In particular, the cited portions of Iwatsu merely disclose a lithographic apparatus having a wafer table and a light radiating means. Iwatsu et al. fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, a processing unit configured to obtain at least one of a rate of processing and a time of processing associated with a plurality of substrate lots to be introduced into a part of a substrate processing system and to determine an order of introduction of the plurality of substrate lots into the part of the substrate processing system to at least one of increase the rate of processing and decrease the time of processing of the plurality of substrate lots as recited in claim 21.

Claims 22-23 depend from claim 21 and are, therefore, patentable for at least the same reasons provided above related to claim 21, and for the additional features recited therein.

Because the cited portions of Narita et al., Morimoto et al. and Iwatsu taken singly or in any proper combination, fail to disclose, teach or suggest the claimed subject matter of claims 21-23, Applicant respectfully requests that the rejection under 35 U.S.C. §103(a) of claims 21-23 based on Narita et al. in view of Morimoto et al. further in view of Iwatsu be withdrawn and the claims allowed.

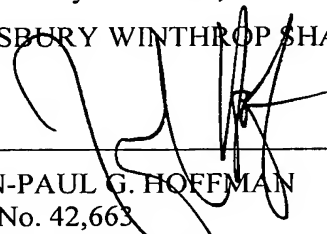
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All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975 under our order no. 081468/0304889. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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